

# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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January 8, 2007

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TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor *DWH*

FROM: James D. Smith, Environmental Scientist I - Hydrogeology, Team Lead *JS 01/09/07*

RE: Diversion Maintenance, Castle Valley Resources, Inc., Wellington Preparation Plant, C/007/0012, Task ID # 2702

### SUMMARY:

An onsite inspection on August 29, 2006 identified problems with maintenance of ditch UD-1A. This ditch was designed to control runoff from the large adjacent undisturbed area south of the ditch and divert it around the Wellington Prep Plant (the disturbed area boundary and permit boundary coincide, and the area south of UD-1A includes some surface identified in the MRP as disturbed, even though there has been no surface disturbance). G9-3502 and G5-3903 are certified as-built drawings of UD-1A. UD-1A was incised into the shale-derived soil, and the runoff from the undisturbed areas reports to the ditch along its length as both overland flow and flow concentrated in small, natural channels. The disturbed side of the ditch is a berm, formed of material excavated from the ditch, that separates water in the ditch from the disturbed area.

Runoff from the undisturbed side has eroded rills into the south side of the ditch. Sediment eroded from these rills has at times accumulated in the ditch and interfered with the ditch flow: this was the situation observed on August 29. By damming the flow or by raising the bottom of the ditch, these sediments have the potential to raise the water level in the ditch enough for the water to breach the berm and flow into the disturbed area. In the past, the sediment was removed from the ditch and placed back on the south slope to fill the rills, but subsequent storms simply triggered a new cycle of erosion and deposition in the ditch.

The proposed amendment modifies the MRP to clarify the maintenance plan for this ditch. Sediment removed from the ditch will no longer be placed back on the undisturbed (south) side, in the rills. It is not clearly stated where this material will be placed, but it will apparently be added to the berm. The Permittee should consider stockpiling this material for use as cover during reclamation.

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**TECHNICAL ANALYSIS:**

**OPERATION PLAN**

**HYDROLOGIC INFORMATION**

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

**Analysis:**

**Diversions: General**

Maintenance of ditch UD-1A is clarified. Sediment cleaned from the ditch will no longer be placed back on the undisturbed (south) side of the ditch. This should help keep this ditch clear and functioning as designed.

The sediment removed from the ditch is apparently to be placed on the berm on the disturbed (north) side of the ditch, but the Permittee should consider a separate stockpile for this material for use as cover during reclamation.

**Findings:**

Hydrologic Information in this amendment is sufficient to meet the requirements of the Coal Mining Rules.

**RECOMMENDATIONS:**

The amendment should be approved.